

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A communication control method used in a cellular mobile communication system in which each base station can radiate radio wave beams to a plurality of directions and each base station communicates with mobile stations by using the same frequency by radiating radio wave beams to the mobile stations, said method comprising the steps of:

receiving at a control station from a base station, radiation timing information for radiating a radio wave beam in a direction;

controlling based on said received radiation timing information, first timing at which a base station radiates a first radio wave beam such that said first timing is different from second timing at which another base station radiates a second radio wave beam which may cause interference with said first radio wave beam; and

sending updated radiation timing information from the control station to the base station.

Claim 2 (Currently Amended): ~~The communication control method as claimed in Claim 1, said method comprising the steps of:~~

A communication control method used in a cellular mobile communication system in which each base station can radiate radio wave beams to a plurality of directions and each base station communicates with mobile stations by using the same frequency by radiating radio wave beams to the mobile stations, said method comprising the steps of:

receiving at a control station from a base station, radiation timing information for radiating a radio wave beam in a direction;

controlling based on said received radiation timing information, first timing at which a base station radiates a first radio wave beam such that said first timing is different from second timing at which another base station radiates a second radio wave beam which may cause interference with said first radio wave beam;

sending updated radiation timing information from the control station to the base station;

predetermining other base stations for which interference caused by radio wave beams radiated by a base station should be considered;

notifying said base station of directions and radiation timing of radio wave beams radiated by said other base stations;

controlling said base station on the basis of said directions and radiation timing such that timing at which said base station radiates radio wave beams is different from timing at which said other base stations radiate radio wave beams which may cause interference with radio wave beams radiated by said base station.

Claim 3 (Original): The communication control method as claimed in claim 2, wherein said each of other base stations is an adjacent base station to said base station.

Claim 4 (Currently Amended): ~~The communication control method as claimed in claim 1, said method comprising the step of:~~

A communication control method used in a cellular mobile communication system in which each base station can radiate radio wave beams to a plurality of directions and each base station communicates with mobile stations by using the same frequency by radiating radio wave beams to the mobile stations, said method comprising the steps of:

receiving at a control station from a base station, radiation timing information for radiating a radio wave beam in a direction;

controlling based on said received radiation timing information, first timing at which a base station radiates a first radio wave beam such that said first timing is different from second timing at which another base station radiates a second radio wave beam which may cause interference with said first radio wave beam;

sending updated radiation timing information from the control station to the base station;

when a base station which communicates with a mobile station switches a radiating radio wave beam from a first radio wave beam to a second radio wave beam as said mobile station moves, controlling said base station such that timing at which said first radio wave beam is radiated is different from timing at which said second radio wave beam is radiated.

Claim 5 (Original): The communication control method as claimed in claim 1, said method comprising the step of.

when a radio wave beam which is radiated by a base station covers a plurality of mobile stations, controlling said base station such that timing at which said radio wave beam is radiated is different for each mobile station.

Claim 6 (Original): The communication control method as claimed in claim 1, said method comprising the step of:

controlling timing of a radio wave beam at which a base station radiates such that said radio wave beam is radiated for a mobile station in a plurality of time slots at predetermined intervals.

Claim 7 (Currently Amended): The communication control method as claimed in claim 6, wherein the number of said time slots is determined on the ~~bases~~basis of communication state in said base station.

Claim 8 (Currently Amended): ~~The communication control method as claimed in claim 1, said method comprising the steps of:~~

A communication control method used in a cellular mobile communication system in which each base station can radiate radio wave beams to a plurality of directions and each base station communicates with mobile stations by using the same frequency by radiating radio wave beams to the mobile stations, said method comprising the steps of:

receiving at a control station from a base station, radiation timing information for radiating a radio wave beam in a direction;

controlling based on said received radiation timing information, first timing at which a base station radiates a first radio wave beam such that said first timing is different from second timing at which another base station radiates a second radio wave beam which may cause interference with said first radio wave beam;

sending updated radiation timing information from the control station to the base station;

when a received level in a mobile station for a signal by a radio wave beam come from a base station directly is lowered, said mobile station directing a radio wave beam to a direction from which another radio wave beam comes, said another radio wave beam with a directional antenna having the best receiving quality among other radio wave beams arriving

at said mobile station from said base station, and said mobile station requesting allocation of a time slot for said another radio wave beam; and

said base station allocating said time slot such that said time slot is different from timing at which other base stations radiate radio wave beams which may cause interference with said another radio wave beam.

Claim 9 (Currently Amended): ~~The communication control method as claimed in claim 1, said method comprising the steps of:~~

A communication control method used in a cellular mobile communication system in which each base station can radiate radio wave beams to a plurality of directions and each base station communicates with mobile stations by using the same frequency by radiating radio wave beams to the mobile stations, said method comprising the steps of:

receiving at a control station from a base station, radiation timing information for radiating a radio wave beam in a direction;

controlling based on said received radiation timing information, first timing at which a base station radiates a first radio wave beam such that said first timing is different from second timing at which another base station radiates a second radio wave beam which may cause interference with said first radio wave beam;

sending updated radiation timing information from the control station to the base station;

a mobile station receiving a signal by a first radio wave beam from a direction of a base station,

said mobile station directing a radio wave beam with a directional antenna to a direction from which a second radio wave beam comes, said second radio wave beam being radiated by said base station and arriving at said mobile station;

said mobile station requesting allocation of a time slot for said second radio wave beam; said base station allocating said time slot such that said time slot is different from timing at which other base stations radiate radio wave beams which may cause interference with said second radio wave beam; and

said mobile station combining a received signal by said first radio wave beam and a received signal by said second radio wave beam.

Claim 10 (Currently Amended): ~~The communication control method as claimed in claim 1, said method comprising the steps of:~~

A communication control method used in a cellular mobile communication system in which each base station can radiate radio wave beams to a plurality of directions and each base station communicates with mobile stations by using the same frequency by radiating radio wave beams to the mobile stations, said method comprising the steps of:

receiving at a control station from a base station, radiation timing information for radiating a radio wave beam in a direction;

controlling based on said received radiation timing information, first timing at which a base station radiates a first radio wave beam such that said first timing is different from second timing at which another base station radiates a second radio wave beam which may cause interference with said first radio wave beam;

sending updated radiation timing information from the control station to the base station;

when a received level in a base station for a signal by a radio wave beam come from direction of a mobile station is lowered, said base station directing a radio wave beam to a direction from which another radio wave beam comes to keep a path, said another radio wave beam having the best receiving quality among other radio wave beams arriving at said base station from said mobile station.

Claim 11 (Currently Amended): ~~The communication control method as claimed in claim 1, said method comprising the steps of:~~

A communication control method used in a cellular mobile communication system in which each base station can radiate radio wave beams to a plurality of directions and each base station communicates with mobile stations by using the same frequency by radiating radio wave beams to the mobile stations, said method comprising the steps of:

receiving at a control station from a base station, radiation timing information for radiating a radio wave beam in a direction;

controlling based on said received radiation timing information, first timing at which a base station radiates a first radio wave beam such that said first timing is different from second timing at which another base station radiates a second radio wave beam which may cause interference with said first radio wave beam;

sending updated radiation timing information from the control station to the base station;

when a received level in a mobile station for a signal by a radio wave beam come from a base station directly is lowered, said mobile station selecting another radio wave beam, said another radio wave beam having the best receiving quality among other radio

wave beams arriving at said mobile station from said base station, and said mobile station requesting allocation of a time slot for said another radio wave beam; and

said base station allocating said time slot such that said time slot is different from timing at which other base stations radiate radio wave beams which may cause interference with said another radio wave beam.

Claim 12 (Currently Amended): ~~The communication control method as claimed in claim 1, said method comprising the steps of:~~

A communication control method used in a cellular mobile communication system in which each base station can radiate radio wave beams to a plurality of directions and each base station communicates with mobile stations by using the same frequency by radiating radio wave beams to the mobile stations, said method comprising the steps of:

receiving at a control station from a base station, radiation timing information for radiating a radio wave beam in a direction;

controlling based on said received radiation timing information, first timing at which a base station radiates a first radio wave beam such that said first timing is different from second timing at which another base station radiates a second radio wave beam which may cause interference with said first radio wave beam;

sending updated radiation timing information from the control station to the base station;

a mobile station receiving a signal by a first radio wave beam from a direction of a base station,

said mobile station requesting allocation of a time slot for a second radio wave beam, said second radio wave beam being radiated by said base station and arriving at said mobile



station; said base station allocating said time slot such that said time slot is different from timing at which other base stations radiate radio wave beams which may cause interference with said second radio wave beam; and

said mobile station combining a received signal by said first radio wave beam and a received signal by said second radio wave beam.

Claim 13 (Currently Amended): A communication control apparatus in a cellular mobile communication system which controls communication between each base station and a mobile station in which each base station can radiate radio wave beams to a plurality of directions and each base station communicates with mobile stations by using the same frequency by radiating a radio wave beam to the mobile station, said apparatus comprising:

a receiving part for receiving at a control station from a base station, radiation timing information for radiating a radio wave beam in a direction;

a timing control part for controlling first timing at which a base station radiates a first radio wave beam such that said first timing is different from second timing at which another base station radiates a second radio wave beam which may cause interference with said first radio wave beam, and

a sending part for sending updated radiation timing information from the control station to the base station.

Claim 14 (Original): A mobile station in a cellular mobile communication system in which each base station radiates a radio wave beam to a mobile station and each base station communicates with a mobile station by using the same frequency, said mobile station comprising:

a part for, when a received level in a mobile station for a signal by a radio wave beam coming from a base station directly is lowered, directing a radio wave beam with a directional antenna, to a direction from which another radio wave beam comes, and requesting allocation of a time slot for said another radio wave beam, said another radio wave beam having the best receiving quality among other radio wave beams arriving at said mobile station from said base station;

wherein said base station allocates said time slot such that said time slot is different from timing at which other base stations radiate radio wave beams which may cause interference with said another radio wave beam.

Claim 15 (Original): A mobile station in a cellular mobile communication system in which each base station radiates a radio wave beam to a mobile station and each base station communicates with a mobile station by using the same frequency, said mobile station comprising:

a part for receiving a signal by a first radio wave beam from a direction of a base station, and directing a radio wave beam with a directional antenna to a direction from which a second radio wave beam comes, said second radio wave beam being radiated by said base station and arriving at said mobile station;

a part for requesting allocation of a time slot for said second radio wave beam;

a part for combining a received signal by said first radio wave beam and a received signal by said second radio wave beam after said base station allocates said time slot such that said time slot is different from timing at which other base stations radiate radio wave beams which may cause interference with said second radio wave beam.